Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

January 10, 2020

Federally Enforceable District Origin Operating Permit (FEDOOP) Statement of Basis

Source: Sealed Air Corporation
7665 National Turnpike
Louisville, KY 40214

Owner: Sealed Air Corporation
7665 National Turnpike
Louisville, KY 40214

Application Documents:	See Table I-9	Administratively Complete:	August 29, 2019
Draft Permit:	Dec 10, 2019	Proposed Permit:	Dec 10, 2019
Permitting Engineer:	Shannon Hosey	Permit Number:	O-1668-19-F
Plant ID: 1668	SIC: 3086	NAICS:	32615

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

This permit action renews the FEDOOP.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter less than 10 microns (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$). Jefferson County is classified as a nonattainment area for ozone (O_3). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO_2).

Permit Application Type:

☐ Initial issuance

Permit Revision
- ☐ Administrative
- ☐ Minor
- ☐ Significant

☒ Permit renewal

Compliance Summary:

☒ Compliance certification signed
☐ Source is out of compliance
☐ Compliance schedule included
☒ Source is operating in compliance

I Source Information

1. Product Description:

Sealed Air Corporation is a polyethylene foam manufacturing facility.

2. Process Description:

Polyethylene in the form of Polyolefin is pneumatically conveyed to a silo for storage and then to the extruders. Butane and propane are delivered and stored in storage tanks in liquid form. During the process, the butane and propane are pumped to the extruder lines and "metered into the process." In the extruders, the plastic is melted, and butane is injected. The extruders are heated using electric heaters. From the extruders, rolls pull sheet foam or a cross saw cuts the plank foam. An accumulator system cools the foam and there is a perforator and edge trim for the plank foam before they are sent to the palletizer/winder. The foam is sent to a heated warehouse and stored. The RTO at 1500 ºF, controls the VOC emissions from the warehouse.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1, U3	Eight extruders, and a conveyor system with a cross saw, a perforator and an edge trim for plank polyethylene foam to cool and cut the material before winding or stacking the material. One "curing" warehouse for finished goods that is vented to a thermal oxidizer (RTO). One warehouse for storing finished goods that is uncontrolled.
U2	Six pneumatically conveyed silos each equipped with a bin vent for the storage of polyethylene.

5. Fugitive Sources:

The fugitive sources identified by the source are from storing the Cell-Aire and Stratocell foam in the uncontrolled warehouse.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
27917-12-F	07/25/12	08/30/12	Initial	Initial Permit Issuance and Incorporate Construction Permits 285-08-C, 286-08-C, 287-08-C, 288-08-C, 289-08-C, 290-08-C and

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				177-09-C
O-1668-14-F	10/22/14	11/24/14	Revision	Significant revision to allow product to be stored in the uncontrolled warehouse
O-1668-14-F (R1)	5/27/17	7/26/17	Signif.	Significant Revision to incorporate Construction Permit C-1668-1000-15-F and change G.C. G9
O-1668-19-F	12/10/2019	01/10/2020	Renewal	Permit Renewal

7. Application and Related Documents

Document Handle	Date	Description
90717	08/16/2019	FEDOOP Renewal Application
96867	08/28/2019	Additional Information for FEDOOP Renewal Application
113892	08/29/2019	Administratively complete letter from District

8. Emission Summary

Pollutant	District Calculated Emissions (tpy) (2017)	Pollutant that triggered Major Source Status (based on PTE)
CO	0.31	No
NO_x	0.37	No
SO_2	0.0022	No
PM_{10}	0.5	No
VOC	13	Yes
Total HAPs	0	No
Single HAP > 1 tpy	NA	No

9. Applicable Requirements

☐	40 CFR 60	☒	SIP	☐	40 CFR 63
☐	40 CFR 61	☒	District Origin	☐	Other

10. Referenced Federal Regulations: NA

Non-Applicable Regulations: NA

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Sealed Air does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Prevention of Accidental Releases 112(r):

The source does manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.

3. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
2.17	Federally Enforceable District Origin Operating Permits	
5.00	Definitions	Regulation 5.00 establishes emission limits for exempt "stationary sources" that would otherwise be subject to the STAR Program environmental acceptability goals.
7.08	Standards of Performance for New Process Operations	Regulation 7.08 establishes emission standards for processes that emit PM which were constructed after September 1, 1976.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Regulation 7.25 establishes requirements for VOC for equipment installed after June 13, 1979.

b. Plantwide

Sealed Air is potentially major for VOC. Regulation 2.17 – F*ederally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits

of VOC less than 100 tons per year, to be classified as a synthetic minor (FEDOOP) source.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an regular reports to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1.

c. Emission Unit U1 – Extruders, Conveyor System, Warehouses

EP	Description	Applicable Regulations
Emission Unit U1		
E1	Electric Plank Extruder, Davis Standard 4000 lb/hr, with a raw material feed cyclone	7.08, 7.25
E2	Electric Foam Extruder, Bandera 2300 lb/hr	7.25
E3	Electric Foam Extruder, Moi 700 lb/hr	7.25
E4	Foam Reprocessing Extruder, Sterling/Davis Standard 1500 lb/hr, with three (3) fluff bins and a Gaylord box loading and unloading station	7.08, 7.25
E5	Cure Warehouse	7.25
E6	Conveyor system including edge trimming, perforating, stacking, and cutting	7.08, 7.25
E7	Warehouse for storing finished goods	7.25
Emission Unit U2		
E8a	Pneumatically conveyed silo 7000 lb/hr	7.08
E8b	Pneumatically conveyed silo 7000 lb/hr	7.08
E8c	Pneumatically conveyed silo 7000 lb/hr	7.08

EP	Description	Applicable Regulations
E8d	Pneumatically conveyed silo 7000 lb/hr	7.08
E8e	Pneumatically conveyed silo 7000 lb/hr	7.08
E8f	Pneumatically conveyed silo 7000 lb/hr	7.08
Emission Unit U3		
E9	Three (3) Bubble Wrap Extruders, Egan 1000 lb/hr with a raw material feed cyclone and two (2) day bins	7.08
E10	Moi extruder, Model 150-SAC #01 (E10), with a capacity of 700 lb/hr to manufacture lightweight polyethelyne foam	7.08, 7.25

i. Standards and Operation Limits

(1) Opacity

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

(2) PM

The emission standard for PM for the equipment in the emission unit was determined in accordance with Regulation 7.08, section 3.1.2 as follows:

PM lb/hr limit = 3.59 * (process weight, tons/hr)$^{0.62}$

(3) VOC

For Emission Points E1, E2, E3, E4, E5, E6, and E10, the thermal oxidizer is BACT, based on an analysis submitted Mary 22, 2008. Based on a BACT analysis submitted September 26, 2014, the controlled VOC emissions from Emission Points E1, E2, E3, E4, E5, E6, and E10 are limited to 27 tons in any twelve consecutive month period and the uncontrolled VOC emission form Emission Point E7 is limited to 33 tons in any twelve consecutive month period. Also, only Cell-Air foam and Stratocell foam shall be stored in the uncontrolled warehouse. [1]

[1] The original BACT analysis submitted on 05/22/2008 was a thermal oxidizer, resulting in potential (controlled) emissions of 60 tpy. The company submitted a BACT analysis on 9/26/14 for the new product (EU U3). The new product cannot be stored in the controlled warehouse due to product integrity, therefore resulting in (uncontrolled) potential emissions of 33 tpy. At 33 tpy, the District has determined that controls are not feasible for the uncontrolled warehouse. The (controlled) potential emissions of 27 tpy is what remains from the original 60 tpy limit from the BACT analysis.

III Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

There are no records of any violations of the terms of the present or prior construction or operating permits.

6. Calculation Methodology or Other Approved Method:

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc.) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

Table 1-U1

Emission Point	Description	Emission Factor/Calculation Methodology
E1	Electric Plank Extruder, Davis Standard 4000 lb/hr, with a raw material feed cyclone	Emission Factor Fire VOC = 1.1 lb VOC/ton product RTO = 99.98% Low Density Polyethylene (500º F to 620º F) lb PM/ MM lb processed = 2.11225 x T – 1025.20
E2	Electric Foam Extruder, Bandera 2300 lb/hr	
E3	Electric Foam Extruder, Moi 700 lb/hr	
E4	Foam Reprocessing Extruder, Sterling/Davis Standard 1500 lb/hr, with three (3) fluff bins and a Gaylord box loading and unloading station	
E5	Cure Warehouse	Amount of butane and propane that will evaporate lb/hr

Emission Point	Description	Emission Factor/Calculation Methodology
E6	Conveyor system including edge trimming, perforating, stacking, and cutting	Michigan Department of Environmental Quality Emission Factors for Plastic Production and Products Manufacturing: Film Production Die (Flat/Circular) 0.0958 lb PM/ton product
E7	Warehouse for storing finished goods	Amount of butane and propane that will evaporate lb/hr
E9	Three (3) Bubble Wrap Extruders, Egan 1000 lb/hr with a raw material feed cyclone and two (2) day bins	lb PM/ MM lb processed = 2.11225 x T – 1025.20
E10	Moi extruder, Model 150-SAC #01 (E10), with a capacity of 700 lb/hr to manufacture lightweight polyethelyne foam	Low Density Polyethylene (500º F to 620º F) lb VOC/ MM lb processed = 1.22075 x T – 575.04 lb PM/ MM lb processed = 2.11225 x T – 1025.20
E8a	Pneumatically conveyed silo 7000 lb/hr	Emission Factor Fire PM = 0.8 lb PM/ton product
E8b	Pneumatically conveyed silo 7000 lb/hr	
E8c	Pneumatically conveyed silo 7000 lb/hr	
E8d	Pneumatically conveyed silo 7000 lb/hr	
E8e	Pneumatically conveyed silo 7000 lb/hr	

7. Insignificant Activities:

Equipment	Qty	Regulation Basis
Pressurized VOC storage vessels – 18,000 gallon propane tank and 30,000 gallon butane tank	2	Regulation 1.02, Appendix A, 3.26.

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.